

38. The system of claim 15, wherein the distributed sparing configuration is determined irrespective of a geometric arrangement of data storage elements due to a physical structure of the media.

39. The method of claim 35, wherein the step of selecting the spare interval parameter and the spare length parameter defines appropriate defect management for a particular use of the media.

40. The method of claim 1, wherein the step of selecting the user area parameter and replacement area parameter is performed independent of data segment boundaries on the media arising from geometric characteristics of the media.

REMARKS

Claims 1-24 and 35-40 have been rejected by the Examiner. Claims 1-24 and 35-40 are pending in the application.

The prior arguments with respect to the Examiner's rejections submitted by Applicants in the Amendment filed January 4, 2002, are believed to still be applicable to the above rejection of record and are, accordingly, incorporated herein. However, for the sake of brevity, all such arguments will not be repeated herein. Applicants respectfully request that the Examiner reconsider Applicants' previous arguments in combination with the comments set forth below.

The 35 U.S.C. 102 Rejections:

Claims 1-6, 9-10, 12-19, 21-22, 24, and 35-37 are rejected under 35 U.S.C. § 102(e) as being anticipated by Atsatt et al., U.S. Patent 5, 983, 309 (hereinafter Atsatt).

It is well-settled that to anticipate a claim, the reference must teach every element of the claim, see M.P.E.P. § 2131. Moreover, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, "[t]he elements must be arranged as required by the claim," see M.P.E.P. § 2131, citing *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). Furthermore, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim," see M.P.E.P. § 2131, citing *Richardson v. Suzuki Motor Co.*, 9

U.S.P.Q.2d 1913 (Fed. Cir. 1989). Applicants respectfully observe that the rejection does not satisfy these requirements.

Claim 1 recites, among other features, "...the user data replacement area on the media defined by the replacement area parameter may be null ..."

Claim 15 recites, among other features, "...the user data replacement area on the media defined by the replacement area parameter may be null ..."

Claim 35 recites, among other features, "...the number of blocks of a user data sparing area established by the spare length parameter may be zero ..."

The present Office Action states that the #Slip_R variable described by Atsatt teaches the above recitations from claims 1, 15, and 35. Applicants respectfully disagree. Atsatt, at column 9, lines 13-15 states: "The number of slipped sectors per sparing regions is located in #Slip_R". As Applicants noted in Applicants' Amendment of January 4, 2002, from this statement, it is evident that Atsatt's #Slip_R is not a replacement area parameter defining a user data replacement area on the media, nor is it a spare length parameter to establish a number of blocks of a user data sparing area on the media, as recited by the claims. Instead, #Slip_R defines the amount of slipped sectors within a sparing region, which is not useable as a replacement area or sparing area.

The present Office Action argues that if no sectors are defective, #Slip_R indicates sectors available for sparing or replacement.

"The number of slipped sectors per sparing region is indicated by #Slip_R (column 9 lines 12-14), which if no sectors are defective precisely indicates sectors available for sparing or replacement..." (See present Office Action, Paragraph 20).

Applicants assert that in stating the above, the present Office Action at least implicitly concedes that Atsatt's #Slip_R fails to define a user data replacement area or a sparing area when defective sectors are present on a media.

Moreover, Applicants respectfully assert that in making the above argument, the present Office Action is relying on inherency in order equate #Slip_R to a replacement parameter and spare length parameter. Applicants note that in order to properly establish a

rejection based on inherency, “the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art,” M.P.E.P. § 2112, citing *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis original).

The Examiner’s statement that the number of slipped sectors per sparing region precisely indicates sectors available for sparing or replacement, provided that there are no defective sectors, does not reasonably support a conclusion that the #Slip_R value is necessarily a spare length parameter or a replacement area parameter. As stated in *Atsatt* in column 8, lines 17-21, “these sectors ... are reserved for replacing defective sectors or are themselves defective. In other words, if there is a defective sector on one disk and not on another, there must be sufficient slippage to accommodate logical to physical address shifting.” Thus, at the very least, *Atsatt* teaches that the #Slip_R value may account for defective sectors along with sectors reserved for replacing such defective sectors. See the present Office Action at paragraph 6 (“The Slip field indicates sectors ‘reserved for replacing defective sectors’ and those already defective”). Thus, at the very least, *Atsatt* explicitly teaches an instance of #Slip_R which accounts for both defective and replacement sectors. As admitted by the present Office Action, a #Slip_R that accounts for both sectors reserved for replacing defective sectors and defective sectors is not a replacement parameter or a spare length parameter. Accordingly, *Atsatt* does not necessarily teach a replacement parameter or a spare length parameter.

Furthermore, Claims 1, 15, and 35 recite that user data sparing areas and user data replacement areas are defined by replacement area or spare length parameters. Column 9, lines 12-14, of *Atsatt* teaches that PZT entry #Slip_R represents the number of slipped sectors per sparing region. Column 8, lines 55-60 of *Atsatt* teaches that the value of PZT entries, such as #Slip_R, are not used to define media properties, but instead store the information for describing each recording zone on disk media. As such, #Slip_R does not define the number of slipped sectors but instead indicates the number of slipped sectors for informational purposes. Thus, the user data replacement area on the media is not defined by *Atsatt*’s #Slip_R nor is the number of blocks of a user data sparing area established by #Slip_R as recited by claims 1, 15, and 35. Therefore, Applicants respectfully assert that for at least the

above reasons, claims 1, 15, and 35 are patentable over the 35 U.S.C. § 102 rejection of record.

Claims 2-6, 9-10, 12-14, 16-19, 21-22, 24, and 36-40 depend from base claims 1, 15, and 35, respectively, and thus inherit all limitations of their respective base claims. Moreover, each of these claims set forth features and limitations not recited by Atsatt. Thus, Applicants respectfully assert that for at least the above reasons claims 2-6, 9-10, 12-14, 16-19, 21-22, 24, and 36-40 are patentable, and the 35 U.S.C. § 102 rejection should be withdrawn.

SUMMARY

Applicants have added minor amended claims 15 and 35 to correct formatting. The amendments made are not intended to narrow the claims in the face of prior art. No new matter has been added.

The Examiner is thanked for the indication that claims 7-8, 11, 20 and 23 contain allowable content.

Applicants submit that this application is in full condition for allowance. Applicants respectfully request that the Examiner call the below-listed attorney if the Examiner believes that such a discussion would be helpful in resolving any further concerns.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.

Date of Deposit: May 7, 2002

Typed Name: Joy H. Perigo

Signature: 

Respectfully submitted,

By: 

Michael A. Papalas
Attorney/Agent for Applicant(s)
Reg. No. 40,381
Date: May 7, 2002
Telephone No. (214) 855-8186

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

15. (Twice Amended) A system for providing media defect management, said system comprising:

means for providing a user area parameter to define a user data area on the media; and

means for providing a replacement area parameter to define a user data replacement data area on the media, wherein the user data replacement area on the media defined by the replacement area parameter may be null[,]; and

wherein the user area parameter and replacement area parameter are selectable to determine appropriate defect management for a particular use of the media.

35. (Twice Amended) A method for providing media defect management for a block addressable bulk storage media, said method comprising the steps of:

providing a spare interval parameter to establish a number of blocks of a user data area on the media;

providing a spare length parameter to establish a number of blocks of a user data sparing area on the media, wherein the number of blocks of a user data sparing area established by the spare length parameter may be zero;

selecting the spare interval parameter and spare length parameter to determine a particular distributed sparing configuration irrespective of physical zones of the media; and

maintaining a list including information identifying each block of the user data sparing area, wherein the list includes information with respect to a status of each block identified.